PATENT
P56843

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

JUNE-SEO LEE

Serial No.:	10/642,233	Examiner:	*to be assigned*
Filed:	18 August 2003	Art Unit:	2681

For: *WIRELESS NETWORK SYSTEM CAPABLE OF TRACKING A LOCATION OF A MOBILE STATION AND A METHOD FOR TRACKING A LOCATION OF THE MOBILE STATION*

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O.Box 1450
Alexandria, VA 22313-1450

Sir:

In accordance with 37 C.F.R. §1.56, and §§1.97 and 1.98 as amended, Applicant cites, describes, and provides copies of the following art references:

U.S. PATENT REFERENCES:

- U.S. Patent No. 6,101,394 to Illidge, entitled *CDMA MULTIPLE CARRIER PAGING CHANNEL OPTIMIZATION*, published on 8 August 2000.

FOREIGN PATENT REFERENCE:

- International Publication No. WO 93/25050 to Alvesalo et al., entitled *LOCATION UPDATING IN A CELLULAR RADIO NETWORK*, published on 9 December 1993.

- International Publication No. WO 97/24898 to Lahtine, entitled *LOAD*

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REDUCTION OF A VISITOR LOCATION REGISTER, published on 10 July 1997.

- European Patent Application No. EP 1 134 995 to Martin de Nicolas, entitled *METHOD AND DEVICES FOR IMPROVED LOCATION UPDATING IN A MOBILE COMMUNICATION SYSTEM*, published on 19 September 2001.

OTHER DOCUMENTS:

- Australian Examination Report; dated 5 July 2004.

DISCUSSION

In the Australian Examination Report dated on the 5th of July 2004, issued in Applicant's copending Australian Patent application Serial No. 2003-236465, the Examiner cited Illidge U.S. Patent No. 6,101,394 which relates to a method of reducing paging channel usage in a CDMA communication system. Each mobile switching centre maintains in its visitor location registry information regarding a paging channel or carrier frequency that each mobile station registered is monitoring. Then, when it comes time to send a page to a mobile station, the mobile switching centre looks up the information and appends it to the page which is sent to all basestation transceivers. The basestation transceivers extract the information and identify the paging addressed is monitoring. The transceivers then broadcast the page message over their air interfaces on the identified paging channel.

Alvesalo's International Publication No. WO 93/25050 relates to a method for location updating in a cellular radio network. The network stores subscriber data permanently in a home location register (HLR) and temporarily in visitor location registers (VLR) integrated with mobile services switching centers (MSC). In connection with a call setup, the HLR requests the VLR to provide routing information for the subscriber, whereafter the inbound call is routed to the pertinent MSC and the subscriber is paged by the radio path. In the invention, the network updates the

location of the subscriber by check paging performed as a background run at suitable times.

Lahtinen's International Publication No. WO 97/24898 discusses a problem arising when the data of the visitor location register (VLR) are lost for some reason. In this case, only the visitor location register (VLRn) in whose area the mobile station (MS) in located is known. The mobile station (MS) must then be paged in all location areas (LAn) of the visitor location register (VLR). Such paging of mobile stations causes a significant overload. The overload is reduced, according to the invention, by dividing the area covered by a physical visitor location area (VLR) into areas of a plurality of logical visitor location registers (LVLRn). In connection with location updatings, not only the physical visitor location register (VLR) is stored but also information on the logical visitor location register (LVLRn) in whose area the mobile station (MS) is located; in a problematic situation where the switching centre (MSC) is not aware of the location area of the mobile station (MS), the mobile station (MS) is paged, at least at first, only in the area of the logical visitor location register (LVLRn).

Martin de Nicolas's European Patent Application No. EP 1 134 995 discusses a method for a location update in a mobile communication system with a home location register (HL) and visitor location registers (VL). The visitor location registers (VL) serve different parts of the area covered by the communication system and the home location register (HL) holds a data record assigned to a user, the data record comprising parameters for the establishment of connections with the user and an identification of the visitor location register (VL) presently serving the user. Parameters from the record can be copied from the home location register (HL) to the visitor location register (VL) serving the user. In the method it is detected that a user has entered the area served by a visitor location register (VL) and a location update message is sent which indicates the identity of the visitor location register (VL) to the home location register (HL) and stored in the data record for the user. When the establishment of a connection with the user is requested, parameters from the data record in the home location register (HL) are sent to the serving visitor location register (VL) during the establishment of the connection.

The citation of the foregoing references is not intended to constitute an assertion that other or more relevant art does not exist. Accordingly, the Examiner is requested to make a wide-ranging and thorough search of the relevant art.

Pursuant to 37 CFR § 1.97(d), the undersigned attorney hereby certifies that each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign patent application not more than three(3) months prior to the filing of the statement.

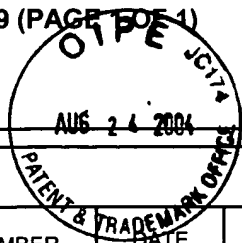No fee is incurred by this Statement.

Respectfully submitted,

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PTO-1449 (PAGE 1 OF 1)	APPLICANT		JUNE-SEO LEE
	FILING DATE 18 August 2003	GROUP	2681

U.S. PATENT DOCUMENTS

EXAMINER	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	6,101,394	08/00	Illidge			12/97

FOREIGN PATENT DOCUMENTS / TRANSLATION

EXAMINER	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	YES	NO
	WO 93/25050	12/93	WO			English	
	WO 97/24898	07/97	WO			English	
	EP 1 134 995	09/01	GB			English	

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

Australian Examination Report; dated 5 July 2004.

EXAMINER:	DATE CONSIDERED:

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP §609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.